STARWARP®

Installation Guide

Version 6.1.0

Order Number: STWIG610

serena

STARWARP® 6.1.0 User Guide

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STARWARP® Publications

Additional copies of the following STARWARP publications may be purchased from SERENA:

STARWARP 6.1.0 User Guide is a guide to STARWARP concepts and facilities.

- The User Guide section explains how StarWarp can help with Year 2000 conversions and is a guide to StarWarp functions and features.
- The Messages section explains both online and batch messages for StarWarp. This section also describes how to deal with error situations.
- The StarBat section contains extensive information on batch facilities. These facilities are designed to execute as background programs and to process control statements. Programmers debugging or designing batch facilities background jobs use the StarBat section.

StarWarp 6.1.0 Reference is designed for professional applications and systems programmers who have experience with programming, file structures, utilities, and testing practices within the mainframe environment.

- The Reference section is an alphabetic guide to the functions and commands of StarWarp.
- The Installation section explains procedures for setting up StarWarp, including installation tailoring, execution of the program, and installation verification.
- The StarWarp Appendixes section provides a history of the various upgrades of StarWarp.

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Contents

Background

Virtual Storage

STARWARP is normally executed in a 3072K or larger region; however, a smaller region can also be used.

The STARWARP load module requires a minimum of 700K of virtual memory. At execution time, about 124K of additional region storage is obtained for disk track buffers. In addition, several STARWARP subcommands obtain significant amounts of region storage temporarily as they proceed. In any case, 850K of region storage should be sufficient for STARWARP; however if STARWARP is used on both sides of an ISPF split, you should plan on providing about 1200K for STARWARP use. In addition to the above, more storage will be required for RETAIN track buffers (about 58K for each track buffer) and GO sessions (about 124K for each GO session).

STARWARP is written in reentrant assembler and is linked with the **RENT** attribute. It should be considered for inclusion in the Link Pack Area (LPA) so that concurrent users may share the same copy in storage and reduce private area region requirements. STARWARP is assembled with attributes **AMODE 24** and **RMODE 24** (below the 16 Meg line), but it switches addressing mode dynamically when it needs to address storage above the line. STARWARP interfaces with several provided modules of which several (PGMDOC, PDSPEDIT and PDSPBROW) are assembled as **RMODE ANY** and **AMODE ANY** to reside above the 16 Meg line.

Auxiliary Storage

STARWARP is a single 700K load module. Several support modules totaling about 100K below the line and 800K above the line are also provided. All of the STARWARP modules can be held on about 40 3390 tracks.

STARWARP has different data set requirements depending on the mode of operation:
1. In its normal execution mode as an ISPF dialog, STARWARP requires a panel and a message library.
2. When STARWARP operates in batch mode, no special data sets are required.
3. When STARWARP operates in line mode, a TSO HELP member should be available for user reference.

All of the STARWARP materials can be held on about 50 cylinders of a 3390 disk volume for a non-SMP installation or about 100 cylinders for an SMP/E installation.

Distribution Tape Contents

The distribution tape uses standard labels. It contains the following data sets:

PDSE610.JCL	(JCL) tape unload members. DCB=(RECFM=FB,LRECL=80,BLKSIZE=9040)
SMPMCS	(MCS) Function PDSE610. DCB=(RECFM=FB,LRECL=80,BLKSIZE=9040)
PDSE610.F1	(LOAD) STARWARP and its support modules. DCB=(RECFM=U,BLKSIZE=18432)
PDSE610.F2	(CNTL) install JCL. DCB=(RECFM=FB,LRECL=80,BLKSIZE=9040)
PDSE610.F3	(PANELS) ISPF panel library. DCB=(RECFM=FB,LRECL=80,BLKSIZE=9040)
PDSE610.F4	(MSGS) ISPF message library. DCB=(RECFM=FB,LRECL=80,BLKSIZE=9040)
PDSE610.F5	(CLIST) CLIST library. DCB=(RECFM=FB,LRECL=80,BLKSIZE=9040)
PDSE610.F6	(ASSEMBLE) source library. DCB=(RECFM=FB,LRECL=80,BLKSIZE=9040)
PDSE610.F7	(HELP) TSO HELP members. DCB=(RECFM=FB,LRECL=80,BLKSIZE=9040)
PDSE610.F8	(SKELS) ISPF skeleton library. DCB=(RECFM=FB,LRECL=80,BLKSIZE=9040)
PDSE610.READ	(MVSREAD) BookManager data. DCB=(RECFM=FB,LRECL=4096,BLKSIZE=4096)
PDSE610.TSRC	(TEST) public domain help library. DCB=(RECFM=FB,LRECL=80,BLKSIZE=9040)
PDSE610.TLOD	(TESTLOAD) public domain load library. DCB=(RECFM=U,BLKSIZE=18432)

The distribution tape is usually a cartridge (3480) at default density. If necessary, a tape reel can be cut at 6250 BPI. If the tape can not be processed at your site, call your marketing representative immediately.

Installation Procedures

DSNAME Prefix

Determine the naming structure for the STARWARP product install libraries. For this installation where somnode is used, replace this name with your chosen high level qualifier, such as SYS2.SERENA.

Do not risk writing over the input volume; make the cartridge read-only or pull any write ring from the tape; check it into your tape library but note the volume name (VOL=SER=) printed on the external label.

Load PDSE610.JCL

PDSE610.JCL is a small library that will be used to load STARWARP data sets to disk. Prepare JCL equivalent to the following to load PDSE610.JCL.

```
                                                          Line Number
//COPY1  EXEC PGM=IEBCOPY                                     (01)
//SYSPRINT DD SYSOUT=*                                        (02)
//SYSUT1   DD DSN=PDSE610.JCL,DISP=(OLD,PASS),                (03)
//            UNIT=3480,VOL=SER=SP????,                       (04)
//            LABEL=(1,SL,EXPDT=98000)                        (05)
//SYSUT2   DD DSN=somnode.PDSE610.JCL,UNIT=SYSDA,             (06)
//            DISP=(,CATLG,DELETE),                           (07)
//            SPACE=(TRK,(15,5,19)),                          (08)
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=9040)            (09)
//SYSIN    DD *                                               (10)
 COPY I=SYSUT1,O=SYSUT2                                       (11)
```

Figure 1. PDSE610.JCL Load JOB

Change line 04 to the correct tape unit name (if required) and the tape volume name.
If your installation cannot process standard labeled tapes created outside of your installation, you will need to invoke bypass label processing by replacing "1,SL" in line 05 with "2,BLP". Also, you may change line 05 to remove ",EXPDT=98000" if desired.

Change line 06 to substitute your chosen prefix instead of "somnode" and the disk unit name (if required).
If you wish to place the PDSE610.JCL data set on a particular disk volume, change line 07 to add ",VOL=SER=volser" where volser is the name of the target disk volume.

If you wish to reblock the PDSE610.JCL data set during the reload operation, change line 09 to a blocksize such as 13680 for 3390 disk units.

Run the job stream as modified to load PDSE610.JCL. After the job has completed successfully, continue with **SMP/E Installation** on page 4 or **Non-SMP Installation** on page 5 next.

SMP/E Installation

The SMP/E members reference a JCL procedure called **SMPPROC**; a sample member by this name is available in "somnode.PDSE610.JCL". If you want to use a different procedure name, change the SMP* members in "somnode.PDSE610.JCL" and "somnode.PDSE610.CNTL". You will also need to change **PDSETGT** to your target zone name and **PDSEDLB** to your DLIB zone name.

If you want to define a new CSI and SMP/E data sets for STARWARP installation, modify member SMPCSI of "somnode.PDSE610.JCL". SMPCSI will define and initialize the VSAM CSI data set and define the SMPLOG, SMPMTS, SMPPTS, SMPSCDS and SMPSTS data sets.

Change member SMPALLOC of "somnode.PDSE610.JCL" to allocate SMP/E target and DLIB data sets. Change the disk unit name (if required). Change the disk volume name; if you do not want a specific output volume, enter "DISKVOL=," to nullify this parameter. Change your prefix for SOMNODE (if required). The source data sets are blocked at 9040 bytes for loading to a 3380 disk volume; you should use a blocksize such as 13680 when loading to a 3390 disk volume. You may also want to reblock these data sets if they will be concatenated to existing data sets at your installation. Submit this job and check for a zero return code.

Change member SMPDDDEF (define DDDEF) of "somnode.PDSE610.JCL" to define DDNAME and data set names for SMP/E dynamic allocation. Change all occurrences of "SOMNODE" to your chosen installation prefix. Be sure to update the SYSLIB definition to include other DDNAMEs as required. The purpose of this change is to add the DDDEF of PDSEASM to the SYSLIB concatenation so SMP/E will use the STARWARP macros in its assemblies. It is suggested that you place PDSEASM last in the concatenation. Submit this job and check for a zero return code if these data sets have been defined previously; if these data sets are being defined for the first time, you should get a return code of four since a "REP" is being performed.

Now, modify member SMPRECV (RECEIVE function PDSE610 and load STARWARP demonstration data sets) of "somnode.PDSE610.JCL". Change the Global CSI name and correct the **????** parameters referenced in the JCL. Submit this job and check for a zero return code.

Change member SMPAPPLY (APPLY) of "somnode.PDSE610.JCL" and check that all parameters conform to your installation standards. Instructions are included in this job to perform an APPLY CHECK. Submit this job and check for a zero return code.

Your target libraries should be filled with the proper STARWARP software at this point. If you do not wish to execute STARWARP directly out of SMP-controlled libraries, you should create copies of PDSELOD, PDSEPNL, PDSEMSG, PDSECLS and PDSEHLP. Although you no longer need data set "somnode.PDSE610.JCL", you should copy the SMP* members into "somnode.PDSE610.CNTL" for future reference. Proceed to set up STARWARP as detailed at Installation Tailoring on page 8.

When you are satisfied that STARWARP is working properly, edit member SMPACC (ACCEPT) from "somnode.PDSE610.CNTL" so that all parameters conform to your installation standards. Instructions are included in this job to perform an ACCEPT CHECK. Submit this job and check for a zero return code.

As mentioned in other sections, several USERMODS are provided to customize STARWARP. These members are in "somnode.PDSE610.CNTL" and they reference the following routines from "somnode.PDSE610.ASSEMBLE":

```
SMP#OPTJ - Link PDS#OPT4 as a separate module from SAMPOPT4
SMP#OPT4 - Link PDS#OPT4 with STARTOOL
```

Non-SMP Installation

Member PDSELOAD is modified first; refer to listing on the following pages; this JCL is in "somnode.PDSE610.JCL(PDSELOAD)".

Edit PDSELOAD to prepare JCL for loading the STARWARP installation data sets as follows:

- Change line 01 to use your standard //jobname JOB statement.
- Change line 03 to the correct tape volume name.
- Change line 04 to the correct tape unit name (if required).
- Change line 05 to choose a disk volume name. If you do not want a specific output volume, enter "DISKVOL=," to nullify this parameter.
- Change line 06 to the correct disk unit name (if required).
- Change line 07 to substitute your chosen prefix.
- Change line 08 if desired to substitute a different middle qualifier.
- You may change lines 12, 14, 16, 18, 20, 22, 24, 26, 28, 30 and 32 to remove "**,EXPDT=98000**" if desired.

If your installation cannot process standard labeled tapes created outside of your installation, you will need to invoke bypass label processing by replacing the following strings:

3,SL	with	**8,BLP**	on line 12
4,SL	with	**11,BLP**	on line 14
5,SL	with	**14,BLP**	on line 16
6,SL	with	**17,BLP**	on line 18
7,SL	with	**20,BLP**	on line 20
8,SL	with	**23,BLP**	on line 22
9,SL	with	**26,BLP**	on line 24
10,SL	with	**29,BLP**	on line 26
11,SL	with	**32,BLP**	on line 28
12,SL	with	**35,BLP**	on line 30
13,SL	with	**38,BLP**	on line 32

The CNTL, PANELS, MSGS, CLISTS, ASM, HELP, SKELS and TSRC data sets can be reblocked during the load operation. These data sets are blocked at 9040 bytes for loading to a 3380 disk volume; you should use a blocksize such as 13680 when loading to a 3390 disk volume. You may also want to reblock these data sets if they will be concatenated to existing data sets at your installation. To reblock these data sets, insert a JCL statement like

// DCB=(RECFM=FB,LRECL=80,BLKSIZE=13680),

between statements 35-36, 37-38, 39-40, 41-42, 43-44, 45-46, 47-48 and 51-52.

Run the job stream as modified to load the STARWARP installation data sets; check for a zero return code.

You no longer need data set "somnode.PDSE610.JCL"; however, it is suggested that you copy member PDSELOAD into "somnode.PDSE610.CNTL" for future reference before proceeding.

```
                                                                Line Number
//JOBNAME JOB ACCOUNTING INFO.CLASS, ETC.                          (01)
//*** THIS PROCEDURE WILL UNLOAD ALL STARTOOL DATA SETS.          ***(02)
//PDSELOAD PROC VOL=SP????,               <=== UPDATE TAPE VOLSER  (03)
//             TAPE=3480,                 <=== UPDATE TAPE UNIT?   (04)
//             DISKVOL=??????,            <=== UPDATE DISK VOLSER  (05)
//             UNIT=SYSDA,                <=== UPDATE DISK UNIT?   (06)
//             SOMNODE='SYS2.SERENA',     <=== UPDATE PREFIX NAME? (07)
//             MIDLV='PDSE610'            <=== UPDATE MIDDLE NAME? (08)
//PDSELOAD EXEC PGM=IEBCOPY                                        (09)
//SYSPRINT DD SYSOUT=*                                             (10)
//ILOAD    DD DSN=PDSE610.F1,VOL=(,RETAIN,SER=&VOL),               (11)
//         UNIT=&TAPE,LABEL=(3,SL,EXPDT=98000),DISP=(OLD,PASS)     (12)
//ICNTL    DD DSN=PDSE610.F2,VOL=(,RETAIN,SER=&VOL),               (13)
//         UNIT=&TAPE,LABEL=(4,SL,EXPDT=98000),DISP=(OLD,PASS)     (14)
//IPANELS  DD DSN=PDSE610.F3,VOL=(,RETAIN,SER=&VOL),               (15)
//         UNIT=&TAPE,LABEL=(5,SL,EXPDT=98000),DISP=(OLD,PASS)     (16)
//IMSGS    DD DSN=PDSE610.F4,VOL=(,RETAIN,SER=&VOL),               (17)
//         UNIT=&TAPE,LABEL=(6,SL,EXPDT=98000),DISP=(OLD,PASS)     (18)
//ICLIST   DD DSN=PDSE610.F5,VOL=(,RETAIN,SER=&VOL),               (19)
//         UNIT=&TAPE,LABEL=(7,SL,EXPDT=98000),DISP=(OLD,PASS)     (20)
//IASMBLR  DD DSN=PDSE610.F6,VOL=(,RETAIN,SER=&VOL),               (21)
//         UNIT=&TAPE,LABEL=(8,SL,EXPDT=98000),DISP=(OLD,PASS)     (22)
//IHELP    DD DSN=PDSE610.F7,VOL=(,RETAIN,SER=&VOL),               (23)
//         UNIT=&TAPE,LABEL=(9,SL,EXPDT=98000),DISP=(OLD,PASS)     (24)
//ISKELS   DD DSN=PDSE610.F8,VOL=(,RETAIN,SER=&VOL),               (25)
//         UNIT=&TAPE,LABEL=(10,SL,EXPDT=98000),DISP=(OLD,PASS)    (26)
//IREAD    DD DSN=PDSE610.READ,VOL=(,RETAIN,SER=&VOL),             (27)
//         UNIT=&TAPE,LABEL=(11,SL,EXPDT=98000),DISP=(OLD,PASS)    (28)
//IOPTSRC  DD DSN=PDSE610.TSRC,VOL=(,RETAIN,SER=&VOL),             (29)
//         UNIT=&TAPE,LABEL=(12,SL,EXPDT=98000),DISP=(OLD,PASS)    (30)
//IOPTLOD  DD DSN=PDSE610.TLOD,VOL=(,RETAIN,SER=&VOL),             (31)
//         UNIT=&TAPE,LABEL=(13,SL,EXPDT=98000),DISP=(OLD,PASS)    (32)
```

First part of PDSELOAD JCL

```
//OLOAD    DD DISP=(,CATLG,DELETE),DSN=&SOMNODE..&MIDLV..LOAD,      (33)
//         UNIT=&UNIT,VOL=SER=&DISKVOL,SPACE=(TRK,(40,10,20))       (34)
//OCNTL    DD DISP=(,CATLG,DELETE),DSN=&SOMNODE..&MIDLV..CNTL,      (35)
//         UNIT=&UNIT,VOL=SER=&DISKVOL,SPACE=(TRK,(20,5,10))        (36)
//OPANELS  DD DISP=(,CATLG,DELETE),DSN=&SOMNODE..&MIDLV..PANELS,    (37)
//         UNIT=&UNIT,VOL=SER=&DISKVOL,SPACE=(TRK,(405,30,220))     (38)
//OMSGS    DD DISP=(,CATLG,DELETE),DSN=&SOMNODE..&MIDLV..MSGS,      (39)
//         UNIT=&UNIT,VOL=SER=&DISKVOL,SPACE=(TRK,(2,1,10))         (40)
//OCLIST   DD DISP=(,CATLG,DELETE),DSN=&SOMNODE..&MIDLV..CLIST,     (41)
//         UNIT=&UNIT,VOL=SER=&DISKVOL,SPACE=(TRK,(15,5,30))        (42)
//OASMBLR  DD DISP=(,CATLG,DELETE),DSN=&SOMNODE..&MIDLV..ASSEMBLE,  (43)
//         UNIT=&UNIT,VOL=SER=&DISKVOL,SPACE=(TRK,(15,5,10))        (44)
//OHELP    DD DISP=(,CATLG,DELETE),DSN=&SOMNODE..&MIDLV..HELP,      (45)
//         UNIT=&UNIT,VOL=SER=&DISKVOL,SPACE=(TRK,(35,5,10))        (46)
//OSKELS   DD DISP=(,CATLG,DELETE),DSN=&SOMNODE..&MIDLV..SKELS,     (47)
//         UNIT=&UNIT,VOL=SER=&DISKVOL,SPACE=(TRK,(2,1,10))         (48)
//OREAD    DD DISP=(,CATLG,DELETE),DSN=&SOMNODE..&MIDLV..READ,      (49)
//         UNIT=&UNIT,VOL=SER=&DISKVOL,SPACE=(TRK,(80,10,5))        (50)
//OOPTSRC  DD DISP=(,CATLG,DELETE),DSN=&SOMNODE..&MIDLV..TSRC,      (51)
//         UNIT=&UNIT,VOL=SER=&DISKVOL,SPACE=(TRK,(5,5,10))         (52)
//OOPTLOD  DD DISP=(,CATLG,DELETE),DSN=&SOMNODE..&MIDLV..TLOD,      (53)
//         UNIT=&UNIT,VOL=SER=&DISKVOL,SPACE=(TRK,(15,5,20))        (54)
//       PEND                                                       (55)
//PDSEL  EXEC  PDSELOAD                                            (56)
LOAD     COPY   I=ILOAD,O=OLOAD                                    (57)
CONTROL  COPY   I=ICNTL,O=OCNTL                                    (58)
PANELS   COPY   I=IPANELS,O=OPANELS                                (59)
MESSAGES COPY   I=IMSGS,O=OMSGS                                    (60)
CLISTS   COPY   I=ICLIST,O=OCLIST                                  (61)
ASM      COPY   I=IASMBLR,O=OASMBLR                                (62)
HELP     COPY   I=IHELP,O=OHELP                                    (63)
SKELS    COPY   I=ISKELS,O=OSKELS                                  (64)
READ     COPY   I=IREAD,O=OREAD                                    (65)
TSRC     COPY   I=IOPTSRC,O=OOPTSRC                                (66)
TLOD     COPY   I=IOPTLOD,O=OOPTLOD                                (67)
```

Figure 2. IEBCOPY JCL for Installation Data Sets

Installation Tailoring

STARWARP has been loaded on disk and it is executable in batch or line mode now.

APPLID ISR

When STARWARP is invoked in an ISPF environment, STARWARP forces an APPLID of **ISR**. This could be changed to force a different APPLID; however, the use of ISR is recommended for several reasons.

STARWARP is a common server and it will be sharing more ISPF ISR variables as time goes on. Also, if another APPLID is used, this APPLID will be in effect for ISPF supported subcommands invoked by STARWARP such as EDIT, EDREC, ISPF and BROWSE.

This is in particular a problem for edit recovery. If an APPLID other than ISR is used for STARWARP, edits which fail under EDIT invoked by STARWARP cannot be recovered by ISPF EDIT; likewise, edits which fail under ISPF EDIT cannot be recovered by EDIT processing under STARWARP.

PF keys are another problem associated with an APPLID other than ISR. Any keys defined under the APPLID used by STARWARP would remain as defined for the EDIT, ISPF and BROWSE subcommands.

PROFILE MSGID

STARWARP honors **PROFILE NOMSGID** by displaying program messages without the message identifiers. It is recommended that all STARWARP users operate with message identifiers enabled so they can reference messages using their identifiers in the Messages section of the STARWARP User Reference and in the MSG section of the HELP member.

When STARWARP initializes, it checks for MSGID in the profile. If it is set to NOMSGID, STARWARP issues a PDS531W warning message which suggests that they enter the command: **TSO PROFILE MSGID**

You should try to educate your users on **PROFILE MSGID**. In addition, they should be using **PROFILE WTPMSG** so that they get proper diagnostic information for any problems they encounter.

BookManager Online Books

STARWARP documentation is provided in BookManager format in "somnode.PDSE610.READ". This is a PDS containing all BookManager books for STARWARP and a Bookshelf search index for STARWARP. Read the instructions and submit the JCL from member PDSREADW in "somnode.PDSE610.CNTL" to copy these data sets to BookManager BOOK and BKINDEX data sets. This job also creates a Bookshelf data set with type BKSHELF.

These data sets can be used by BookManager READ/MVS or BookManager READ/2, READ/DOS or READ for Windows. In addition, IBM library manager READ on the OS/390 CD Collection programs since March,1999 are full-function and can be used to read any STARWARP manual.

If you wish to transfer BookManager Book or Bookshelf search index files to OS/2, DOS or Windows, be sure to transfer in binary format (do not use ASCII or CRLF). To transfer these data sets to MVS, be sure to use RECFM=FB, LRECL=4096 and BLKSIZE=4096. A Bookshelf data set requires ASCII and CRLF on a transfer and DCB of RECFM=VB, LRECL=255 with any BLKSIZE.

Executing STARWARP

At this point, STARWARP installation tailoring is complete. You may test STARWARP using member **LIBDEF**, **LIBDEF2** or **LIBDEF3** of "somnode.PDSE610.CLIST" or wait until the members are moved into production libraries. The LIBDEF CLISTS can invoke STARWARP from the distribution libraries (including the load library); you should copy one of the LIBDEF CLISTS to a common CLIST library, rename it to STARWARP or PDSE and change data set names as required.

LIBDEF invokes STARWARP using the last data set referenced by STARWARP as the active data set.
Invoke the CLIST as follows:

TSO %STARWARP

LIBDEF2 invokes STARWARP via the PDS@PRIM panel, which will prompt for a data set name.
Invoke the CLIST as follows:

TSO %STARWARP

LIBDEF3 prompts for a data set name if necessary and invokes STARWARP.
Invoke the CLIST as follows:

TSO %STARWARP your.data.set.name

LOAD members

It is recommended that "somnode.PDSE610.LOAD" be copied into a system link library (or several reentrant members into SYS1.LPALIB) or a STEPLIB to avoid problems with ISPF ISPLLIB.

If you move STARWARP and its aliases, STARTOOL, STARBAT, PDSTOOLS, PDSE and PDS, into the LPALIB, you should also move PDS#OPT4, PDSCOMPD, PDSEAUTH, PDSPBROW, PDSPEDIT and PDSRX with them. You will need to create ISPTCM entries (See ISPF Installation and Customization) as follows:

```
ISPTCM  ENTRY,ENTNAME=STARWARP,FLAG=42
ISPTCM  ENTRY,ENTNAME=STARTOOL,FLAG=42
ISPTCM  ENTRY,ENTNAME=PDSTOOLS,FLAG=42
ISPTCM  ENTRY,ENTNAME=PDSE,FLAG=42
ISPTCM  ENTRY,ENTNAME=PDS,FLAG=42
```

In addition, if you assign any of the alternate entry point names to STARWARP, you will need a similar ISPTCM entry for each added name.

If your site has CA-ACF2, you will probably need to add entries for STARWARP, STARTOOL, PDSTOOLS, PDSE, PDS and any alternative entry points to the command limiting list so that ACF2 will recognize these as valid command processor names.

Use IEBCOPY with COPYMOD to copy these members.

Panels and Messages

After the load members have been copied into an execution library, you may chose to use ISPF's LIBDEF service to reference STARWARP panel members (with ISPPLIB) and message members (with ISPMLIB). This may be done via a CLIST such as **LIBDEF** or **LIBDEF2** in "somnode.PDSE610.CLIST" or dynamically using the PLIB and MLIB operands of the #DYNLIBS macro.

As an alternative, you may chose to change your LOGON procedure allocation for ISPPLIB and ISPMLIB through a CLIST or by LOGON procedure changes.

The panel and messages members can be copied into your system ISPF libraries or you can reallocate your ISPF libraries to include STARWARP panels and messages with a CLIST similar to the following:

```
PROC 0
 /**********  Always concatenate the higher block size first!  ******/
 FREE FI(ISPPLIB,ISPMLIB)
 ALLOC FI(ISPPLIB) DA('somnode.PDSE610.PANELS'     +
       'SYS2.ISPF.PLIB')  SHR REUSE  /* MODIFY TO ADD ALL LIBRARIES */
 ALLOC FI(ISPMLIB) DA('somnode.PDSE610.MSGS',      +
       'SYS2.ISPF.MLIB')  SHR REUSE  /* MODIFY TO ADD ALL LIBRARIES */
 PROFILE MSGID  /* SO STARWARP WILL DISPLAY MSGID'S */
```

Exit from ISPF into native TSO *(READY mode)* and execute the CLIST created above. Reenter ISPF. At this point, STARWARP can be invoked via ISPF option 6, the ISPF TSO command or as a line command from ISPF option 3.4.

Connect the ISPF Panels

One method of connecting STARWARP is the following **VENDOR** panel. It can be attached to your ISR@PRIM via option "V" in the translate section **`V,'PANEL(VENDOR)'`**. Your users key in **V** on the main menu *(ISR@PRIM)* and go to panel **VENDOR** which is already set to invoke STARWARP. "ISPF Panel VENDOR" can be expanded on to include other software in the future.

```
)BODY EXPAND(!!)
%!-!  Vendor Supplied Software  !-!
%Option ===>_ZCMD ! !+
%
%   1 +STARWARP   - Invoke StarWarp as a command
%   2 +STARWARP   - Invoke StarWarp with a panel
%   3 +Other      - Invoke other vendor software (not supplied)
%   X +Exit       - Return to primary option menu
+
+Press%ENTER+to continue; Enter%END Command+to exit.
)PROC
  &ZSEL = TRANS( TRUNC (&ZCMD,'.')
                 1,'CMD(STARWARP *) NEWAPPL(ISR)'
                 2,'PANEL(PDS@PRIM) NEWAPPL(ISR)'
               ' ',' '
                 X,'EXIT'
                 *,'?' )
  &ZTRAIL = .TRAIL
)END
```

Figure 3. ISPF Panel VENDOR

As an alternative, you may want to modify one of your existing selection menus to invoke STARWARP; just include **`s,'PANEL(PDS@PRIM)'`** or **`'s,CMD(STARWARP *)'`** in the translate section of the panel (where **s** is the STARWARP option).

CLIST members

You can access the CLIST library through one of the LIBDEF CLISTS or you can copy the CLISTS provided into a general CLIST library. If you use VB CLIST libraries, these may be copied with ISPF option 3.3 correctly.

Installation Verification

This section summarizes some of the earlier material in this manual. Refer to this section to verify your STARWARP installation, to resolve installation problems, or to check your security implementation. Please review this section before calling SERENA on installation problems.

Before proceeding, insure that you have message prefixes enabled and that you are receiving proper diagnostic information by entering the following command: **TSO PROFILE MSGID WTPMSG**

Linklist Considerations

1. If you placed STARWARP members into a linklist library, be careful that you do not cause a new library extent to be taken. If modules are placed into a new extent in a linklist library, they can not be used until an IPL is performed. A LLA refresh is not sufficient since the linklist data sets are opened during the IPL process; the linklist DEB (Data Extent Block) can not be extended through conventional methods). Normally, you will get S106-0E ABENDs if you attempt to use a module from a new linklist extent.

2. After the linklist entries are refreshed, try invoking STARWARP without a STEPLIB or ISPLLIB allocation. Enter the following command from READY mode:
   STARWARP any.data.set.name

3. If you receive any of the following messages, STARWARP is not installed properly:
   CSV003I REQUESTED MODULE PDSCOMPD NOT FOUND
   CSV003I REQUESTED MODULE PDS#OPT4 NOT FOUND
   These modules have the following uses:
   - PDSCOMPD contains installation identification data.
   - PDS#OPT4 contains your customized installation defaults.

4. If PDS#OPT4 is not available, an internal version called PDS#DFLT will be used instead so that the STARWARP session can proceed. Internally in STARWARP, if any such module is required, an internal address pointer is referenced; if this pointer is zero, a LOAD macro is issued to obtain the external address for the module; the operating system issues a CSV003I message if it is not available as an independent module.

Appendix A. Important Installation Members

PDSE610.JCL Members

Table 1. JCL Members

Member	Description
$$$DOCJ	Short documentation on data set purpose and member usage.
PDSELOAD	IEBCOPY load of all STARWARP data sets.
SMPALLOC	IEFBR14 allocation of STARWARP target and DLIB data sets.
SMPAPPLY	SMP/E APPLY for STARWARP.
SMPCSI	SMP/E allocate and initialize a new CSI and other SMP/E data sets for STARWARP.
SMPDDDEF	SMP/E UCLIN for DDDEFs and zone definitions.
SMPPROC	Sample SMP/E procedure for STARWARP.
SMPRECV	SMP/E RECEIVE for STARWARP and load of optional data sets.

PDSE610.CNTL Members

Table 2. CNTL Members

Member	Description
$$$DOCN	Short documentation on data set purpose and member usage.
COMPBAT	Sample JCL and controls to execute COMPCHK and CSECTCHK in batch
LCTJCL	Sample JCL to separate MAP JCL or LCT output into PDS members.
PDSBATCH	Sample JCL to execute STARWARP under IKJEFT01 (the TSO TMP).
PDSCOBOL	Sample JCL to execute STARWARP in the background for COBOL members
PDSDYNAM	Sample JCL to execute STARWARP using the TSO/E Environment Service.
PDSIEDIT	Sample JCL to execute STARWARP and update members with an edit macro
PDSISPF	Sample JCL to execute STARWARP in batch with ISPMODE services.
PDSREAD	Sample JCL to copy MVS/READ members to sequential data sets.
REASMLNK	Sample PROC for use with DISASM REASM option.
SMPACC	SMP/E ACCEPT of STARWARP.
SMPAPPUS	SMP/E APPLY USERMODS (STARWARP maintenance).
SMPRECUS	SMP/E RECEIVE USERMODS (STARWARP maintenance).

PDSE610.LOAD Members

Table 3. LOAD Members

Member	Description
COMPAREC	SuperC interface for STARWARP.
COMPAREW	COMPAREX interface for STARWARP.
PDS	STARWARP load module alias.
PDS#OPT4	STARWARP default options member.
PDSCOMPD	STARWARP installation constants.
PDSE	STARWARP load module alias.
PDSPGM	PGMDOC subcommand load module.
PDSRX	RX subcommand load module (alias of PDSCOMPD).
PDSTOOLS	STARWARP load module alias.
STARTOOL	STARTOOL load module.
STARBAT	STARWARP load module alias for STARBAT batch execution.
STARWARP	STARWARP load module alias for warping data and dates.

PDSE610.PANELS Members

Table 4. PANELS Members

Member	Description
$$$DOCP	Short documentation on data set purpose and member usage.
PDS@PRIM	STARWARP primary panel; it is used to enter STARWARP with data set prompting.
PDS@:PDSZ	STARWARP normal panels.
PDSMENU	STARTOOL primary panel; you can toggle to this with `MENU STARTOOL`
PDSMENUW	STARWARP primary panel; you can toggle to this with `MENU STARWARP`
PDS0:PDS9	STARWARP tutorial panels.
PDSPN*	STARWARP table panels.
PDSVR610	STARWARP release specific panels for LIBDEF testing.
PDS*UX	STARWARP user command panels; these panels also support dynamic commands.
PDSZINST	STARWARP installation SET defaults panel.

PDSE610.MSGS Members

Table 5. MSGS Members

Member	Description
$$$DOCM	Short documentation on data set purpose and member usage.
PDS#10	STARWARP main message member.
PDS#20	STARWARP translate message member; this supports the TRANS command.
PDS#30	STARWARP messages for PEDIT and PBROWSE.
PDS#40	STARWARP messages for PEDIT Selective Edit.
PDS#53	STARWARP message for release specific LIBDEF testing.

PDSE610.CLIST Members

Table 6. CLIST Members

Member	Description
$$$DOCC	Short documentation on data set purpose and member usage.
IMPACT*	CLISTS to reconcile load CSECT names and source members.
LCTCLEAN	CLIST to clean up linkage edit control statements in the STARWARP log.
PDSDE*	STARWARP demonstration support members.
PDSDPAN	CLIST to support the DPAN line command in MEMLIST--LIBDEF panel display.
PDSTRAP	OUTTRAP REXX to capture output from TSO commands.
ATTRIB	EDIT macro to display ISPF statistics of the current member as edit notes.
CUT	EDIT macro to save lines from an edit session in a table.
DISPCMDS	CLIST to display active command tables.
EQUAL	EDIT macro for repeated edits.
LIBDEF	CLIST with LIBDEFs for testing STARWARP.
LIBDEF2	Alternate version of LIBDEF which invokes STARWARP with PDS@PRIM.
O	EDIT macro to document the use of other STARWARP edit macros.
ONLY	EDIT macro to exclude all lines followed by a FIND ALL.
PASTE	EDIT macro to retrieve CUT lines into an edit session.

Member	Description
PDSEDSN	EDIT macro to initiate a STARWARP session using an edit data set name.
PDSENDC	used to detect the end of CLIST mode under ISPMODE.
REEQUAL	CLIST to reset the EQUAL macro.
TRAP	EDIT macro to capture the output of a TSO command as edit notes.
VARIABLE	CLIST to display and manipulate dialog variables using dialog test option 3.
VOLUME	EDIT macro to display the current volume name as an edit note.

PDSE610.ASSEMBLE Members

Table 7. ASSEMBLE Members

Member	Description
$$$DOCA	Short documentation on data set purpose and member usage.
COMPARE$	Panels for use with COMPARE and the Yale compare.
COMPAREC	Panels for use with COMPARE and SuperC.
COMPAREW	Panels for use with COMPARE and COMPAREX.
PDS#CON*	Documentation and sample members for STARWARP monetary conversion tables.
PDS#EXT*	Documentation and sample members for STARWARP date exits.
PDS#HOL*	Documentation and sample members for STARWARP holiday tables.

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